

Application No. 10/723,796  
Response to Final Office Action

Customer No. 01933

Listing of Claims:

1. (Currently Amended) A plasma cutting process for cutting an object material with a plasma arc generated from a plasma torch, said process comprising:

supplying a dross adhesion inhibitor into a plasma torch

5 head;

moving the dross adhesion inhibitor through the plasma torch head to an exhaust nozzle of the plasma torch head through which the plasma arc is formed; and

10 jetting a the dross adhesion inhibitor from the plasma torch head onto a cutting start position of the object material.

2. (Original) The plasma cutting process according to claim 1, wherein the jetting of the dross adhesion inhibitor from the plasma torch is stopped during cutting of the object material with the plasma arc.

3. (Currently Amended) A plasma cutting machine comprising:

a plasma torch head for generating a plasma arc for cutting an object material; and

a dross adhesion inhibitor supply unit for supplying a dross adhesion inhibitor into the plasma torch head;

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jetting means, ~~provided in the plasma torch,~~ for jetting a the dross adhesion inhibitor through an exhaust nozzle of the plasma torch head through which the plasma arc is formed onto a cutting start position of the object material.

4. (Currently Amended) The plasma cutting machine according to claim 3, wherein a dross adhesion inhibitor supply flow path for supplying the dross adhesion inhibitor into the plasma torch head is connected to an assist gas flow path in which an assist gas flows, said assist gas being jetted from the plasma torch along the plasma arc to assist in cutting of the object material by the plasma arc, and the dross adhesion inhibitor flows through the plasma torch head along the assist gas flow path.

5. (Currently Amended) The plasma cutting machine according to claim 3, wherein a dross adhesion inhibitor supply flow path for supplying the dross adhesion inhibitor into the plasma torch head is connected to a plasma gas flow path in which a plasma gas used for forming the plasma arc flows, and the dross adhesion inhibitor flows through the plasma torch head along the plasma gas flow path.